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GOVERNOR

ENERGY AND ENVIRONMENT CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER
200 FAIR OAKS LANE
FRANKFORT, KENTUCKY 40601-1190
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LEONARD K PETERS
SECRETARY

FACT SHEET

**KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM
PERMIT TO DISCHARGE TREATED WASTEWATER
INTO WATERS OF THE COMMONWEALTH**

KPDES No.: KY0100030 Permit Writer: Ross Bishop Date: June 12, 2009
AI No.: 116

1. SYNOPSIS OF APPLICATION

a. Name and Address of Applicant

Cumberland Harlan Exploration Corporation
P.O. Box 311
Brookside, Kentucky 40801

b. Facility Location

Cumberland Harlan Exploration Corporation- Left Fork Dewatering Well
Left Fork of Straight Creek
Arjay, Bell County, Kentucky

c. Description of Applicant's Operation

Dewatering subsurface strata in an effort to obtain natural gas production (SIC Code 1389).

d. Production Capacity of Facility

Not Applicable

e. Description of Existing Pollution Abatement Facilities

None

f. Permitting Action

Reissuance of a minor individual KPDES permit to a "new discharger" subsurface dewatering operation.

2. **RECEIVING WATERS**

a. Receiving Water Name

Left Fork of Straight Creek

b. Stream Segment Use Classifications

Warm Water Aquatic Habitat, Primary and Secondary Contact Recreation,
and Domestic Water Supply

c. Stream Segment Antidegradation Categorization

Both receiving streams are categorized as "High Quality" Waters.

d. Stream Low Flow Condition

The 7-day, 10-year low flow conditions of the receiving streams are
zero (0) cubic feet per second (cfs).

3. REPORTED DISCHARGE AND PROPOSED LIMITS

Description of Discharge - Subsurface Dewatering Operation. Outfall 001

Effluent Characteristics	Reported Discharge		Proposed Limits		Applicable Water Quality Criteria and/or Effluent Guidelines
	Monthly Average	Daily Maximum	Monthly Average	Daily Maximum	
Flow (MGD)	Variable	Variable	Report	Report	401 KAR 5:065, Section 2(8)
Acidity (as mg/l CaCO_3)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Alkalinity (as mg/l CaCO_3)	Variable	Variable	Report	Report	401 KAR 5:080, Section 1(2)(c)2
Oil & Grease	Variable	Variable	10.0 mg/l	15.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Total Recoverable Iron	Variable	Variable	3.5 mg/l	4.0 mg/l	401 KAR 10:031, Section 6
Total Recoverable Manganese	Variable	Variable	2.0 mg/l	4.0 mg/l	401 KAR 5:080, Section 1(2)(c)2
Total Suspended Solids	Variable	Variable	35.0 mg/l	70.0 mg/l	401 KAR 5:080, Section 1(2)(c)25
pH (standard units)	Variable	Variable	6.0 (min.)	9.0 (max.)	401 KAR 10:031, Section 4(1)(b)

At all times acidity shall be less than alkalinity.

4. **METHODOLOGY USED IN DETERMINING LIMITATIONS**

a. Serial Number

Subsurface Dewatering Operation, Outfall 001

b. Effluent Characteristics

Flow	Total Recoverable Iron	Total Recoverable Manganese
Acidity	Alkalinity	Total Suspended Solids
Oil & Grease	pH	

c. Pertinent Factors

None

d. Monitoring Requirements

Instantaneous flow measurements shall be collected twice per month.

Acidity, Alkalinity, Oil & Grease, pH, Total Recoverable Iron, Total Recoverable Manganese and Total Suspended Solids shall be monitored twice per month by grab sample.

e. Justification of Limits

The Kentucky Administrative Regulations (KARs) cited below have been duly promulgated pursuant to the requirements of Chapter 224 of the Kentucky Revised Statutes (KRSs).

Flow

The monitoring requirement for this parameter is consistent with the requirements of 401 KAR 10:065, Section 2(8).

Acidity, Alkalinity, Oil & Grease, Total Recoverable Manganese and Total Suspended Solids

The limits and requirements for these parameters are consistent with the requirements of 401 KAR 5:080, Section 1(2)(c)2. These limits are representative of the Division of Water's "Best Professional Judgment" (BPJ) determination of the "Best Practicable Control Technology Currently Available" (BPT) and "Best Available Technology Economically Achievable" (BAT) requirements for these types of discharges.

Total Recoverable Iron and pH

The limits for these parameters are consistent with the requirements of 401 KAR 10:031, Section 6.

5. **ANTIDEGRADATION**

The conditions of 401 KAR 10:029, Section 1 have been satisfied by this permit action. Since this permit action involves reissuance of an existing permit, and does not propose an expanded discharge, a review under 401 KAR 10:030 Section 1 is not applicable.

6. **PROPOSED COMPLIANCE SCHEDULE FOR ATTAINING EFFLUENT LIMITATIONS**

Permittee shall comply with the effluent limitations by the effective date of the permit with the following exception.

7. **PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE**

None

8. **PROPOSED SPECIAL CONDITIONS WHICH WILL HAVE A SIGNIFICANT IMPACT ON THE DISCHARGE - continued**

Best Management Practices (BMP) Plan

Pursuant to 401 KAR 5:065, Section 2(10), a BMP requirement shall be included: to control or abate the discharge of pollutants from ancillary areas containing toxic or hazardous substances or those substances which could result in an environmental emergency; where numeric effluent limitations are infeasible; or to carry out the purposes and intent of KRS 224.

Outfall Signage

It is the Best Professional Judgment of the Division of Water, 401 KAR 5:080, Section 1(2)(c)2, that all permittees post a marker at all discharge locations and/or monitoring points. The marker shall be of sufficient size to display the Permittee Name, KPDES permit and outfall numbers in 2 inch letters and shall be prominently displayed. For internal monitoring points the marker shall be of sufficient size to include the outfall number in 2 inch letters and is to be posted as near as possible to the actual sampling location.

9. **PERMIT DURATION**

Five (5) Years. This facility is in the Four Rivers, Upper & Lower Cumberland Basin Management Unit as per the Kentucky Watershed Management Framework.

10. **PERMIT INFORMATION**

The application, draft permit fact sheet, public notice, comments received and additional information is available by writing the Division of Water at 200 Fair Oaks Lane, Frankfort, Kentucky 40601.

11. **REFERENCES AND CITED DOCUMENTS**

All material and documents referenced or cited in this fact sheet are parts of the permit information as described above and are readily available at the Division of Water Central Office. Information regarding these materials may be obtained from the person listed below.

12. **CONTACT**

For further information contact the individual identified on the Public Notice or Ross Bishop at (502) 564-3410 extension 4921, or by e-mail at Brenda.Taylor@ky.gov.

13. **PUBLIC NOTICE INFORMATION**

Please refer to the attached Public Notice for details regarding the procedures for a final permit decision, deadline for comments, and other information required by 401 KAR 5:075, Section 4(2)(e).

KPDES



KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

PERMIT

PERMIT NO.: KY0100030
AI NO.: 116

AUTHORIZATION TO DISCHARGE UNDER THE KENTUCKY POLLUTANT DISCHARGE ELIMINATION SYSTEM

Pursuant to Authority in KRS 224,

Cumberland Harlan Exploration Corporation
P.O. Box 311
Brookside, Kentucky 40801

is authorized to discharge from a facility located at

Cumberland Harlan Exploration Corporation - Mine #11
Jct. of KY 225 & KY 930
Artemus, Knox County, Kentucky

to receiving waters named

Left Fork of Straight Creek

in accordance with effluent limitations, monitoring requirements, and other conditions set forth in PARTS I, II, and III, hereof. The permit consists of this cover sheet, and PART I 1 pages, PART II 1 page, and PART III 1 pages, and PART IV 3 pages.

This permit shall become effective on

This permit and the authorization to discharge shall expire at midnight,

Date Signed

Sandra L. Gruzesky, Director
Division of Water

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

Description of Discharge - Subsurface Dewatering Operation

During the period beginning on the effective date of this permit and lasting through the term of this permit, the permittee is authorized to discharge from Outfall serial number: 001

Such discharges shall be limited and monitored by the permittee as specified below:

	<u>DISCHARGE LIMITATIONS</u>				<u>MONITORING REQUIREMENTS</u>	
	(lbs/day)		Other Units (Specify)		Measurement <u>Frequency</u>	Sample <u>Type</u>
	<u>Monthly Avg.</u>	<u>Daily Max.</u>	<u>Monthly Avg.</u>	<u>Daily Max.</u>		
Flow (MGD)	Report	Report	N/A	N/A	2/Month	Instantaneous
Total Suspended Solids (mg/l)	N/A	N/A	35	70	2/Month	Grab
Total Recoverable Iron (mg/l) ¹	N/A	N/A	3.5	4.0	2/Month	Grab
Total Recoverable Manganese (mg/l)	N/A	N/A	2.0	4.0	2/Month	Grab
Oil & Grease (mg/l) ²	N/A	N/A	10	15	2/Month	Grab
Acidity (as mg/l CaCO ₃)	N/A	N/A	Report	Report	2/Month	Grab
Alkalinity (as mg/l CaCO ₃)	N/A	N/A	Report	Report	2/Month	Grab

The pH of the effluent shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored 2/Month by grab sample

Note: At all times acidity shall be less than alkalinity.
The abbreviation N/A means Not Applicable.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the following location: nearest accessible point prior to discharge to or mixing with the receiving waters or wastestreams from other outfalls.

STANDARD CONDITIONS FOR KPDES PERMIT

This permit has been issued under the provisions of KRS Chapter 224 and regulations promulgated pursuant thereto. Issuance of this permit does not relieve the permittee from the responsibility of obtaining any other permits or licenses required by this Cabinet and other state, federal, and local agencies.

It is the responsibility of the permittee to demonstrate compliance with permit parameter limitations by utilization of sufficiently sensitive analytical methods.

The permittee is also advised that all KPDES permit conditions in KPDES Regulation 401 KAR 5:065, Section 1 will apply to all discharges authorized by this permit.

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PART III - OTHER REQUIREMENTS

A. Reporting of Monitoring Results

Monitoring results obtained during each monitoring period must be reported on a preprinted Discharge Monitoring Report (DMR) Form that will be mailed to you. The completed DMR for each monitoring period must be sent to the Division of Water at the address listed below (with a copy to the appropriate Regional Office) postmarked no later than the 28th day of the month following the monitoring period for which monitoring results were obtained.

Division of Water
Paducah Regional Office
130 Eagle Nest Drive
Paducah, Kentucky 42003
ATTN: Supervisor

Division of Water
Surface Water Permits Branch
Permit Support Section
200 Fair Oaks Lane
Frankfort, Kentucky 40601

B. Reopener Clause

This permit shall be modified, or alternatively revoked and reissued, to comply with any applicable effluent standard or limitation issued or approved under 401 KAR 5:050 through 5:086, if the effluent standard or limitation so issued or approved:

1. Contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
2. Controls any pollutant not limited in the permit.

The permit as modified or reissued under this paragraph shall also contain any other requirements of KRS Chapter 224 when applicable.

C. Disposal of Non-Domestic Wastes

The pass through or non-treatment by the wastewater treatment plant of chemicals or compounds which may injure, be chronically or acutely toxic to or produce adverse physiological or behavioral responses in humans, animals, fish and other aquatic life is not desirable. Materials such as acids, caustics, herbicides, household chemicals or cleansers, insecticides, lawn chemicals, non-biodegradable products, paints, pesticides, pharmaceuticals, and petroleum based products may not be treatable by the wastewater treatment plant and should not be introduced and other environmentally sound methods for disposal should be utilized. The permittee should educate users of its system that introduction of such chemicals or compounds could result in an adverse environmental impact and provide the users with alternative disposal measures.

D. Outfall Signage

The permittee shall post a permanent marker at all discharge locations and/or monitoring points. The marker shall be at least 2 feet by 2 feet in size and a minimum of 3 feet above ground level with the Permittee Name and KPDES permit and outfall numbers in 2 inch letters. For internal monitoring points the marker shall be of sufficient size to include the outfall number in 2 inch letters and shall be posted as near as possible to the actual sampling location.

PART IV

BEST MANAGEMENT PRACTICES

SECTION A. GENERAL CONDITIONS

1. Applicability

These conditions apply to all permittees who use, manufacture, store, handle, or discharge any pollutant listed as: (1) toxic under Section 307(a)(1) of the Clean Water Act; (2) oil, as defined in Section 311(a)(1) of the Act; (3) any pollutant listed as hazardous under Section 311 of the Act; or (4) is defined as a pollutant pursuant to KRS 224.01-010(35) and who have ancillary manufacturing operations which could result in (1) the release of a hazardous substance, pollutant, or contaminant, or (2) an environmental emergency, as defined in KRS 224.01-400, as amended, or any regulation promulgated pursuant thereto (hereinafter, the "BMP pollutants"). These operations include material storage areas; plant site runoff; in-plant transfer, process and material handling areas; loading and unloading operations, and sludge and waste disposal areas.

2. BMP Plan

The permittee shall develop and implement a Best Management Practices (BMP) plan consistent with 401 KAR 10:065, Section 2(10) pursuant to KRS 224.70-110, which prevents or minimizes the potential for the release of "BMP pollutants" from ancillary activities through plant site runoff; spillage or leaks, sludge or waste disposal; or drainage from raw material storage. A Best Management Practices (BMP) plan will be prepared by the permittee unless the permittee can demonstrate through the submission of a BMP outline that the elements and intent of the BMP have been fulfilled through the use of existing plans such as the Spill Prevention Control and Countermeasure (SPCC) plans, contingency plans, and other applicable documents.

3. Implementation

If this is the first time for the BMP requirement, then the plan shall be developed within 90 days of the effective date of the permit. Implementation shall be within 180 days of that submission. For permit renewals the plan in effect at the time of permit reissuance shall remain in effect. Modifications to the plan as a result of ineffectiveness or plan changes to the facility shall be submitted to the Division of Water and implemented as soon as possible.

4. General Requirements

The BMP plan shall:

- a. Be documented in narrative form, and shall include any necessary plot plans, drawings, or maps.
- b. Establish specific objectives for the control of toxic and hazardous pollutants.
 - (1) Each facility component or system shall be examined for its potential for causing a release of "BMP pollutants" due to equipment failure, improper operation, natural phenomena such as rain or snowfall, etc.

- (2) Where experience indicates a reasonable potential for equipment failure (e.g., a tank overflow or leakage), natural condition (e.g., precipitation), or other circumstances which could result in a release of "BMP pollutants," the plan should include a prediction of the direction, rate of flow, and total quantity of the pollutants which could be released from the facility as result of each condition or circumstance.
- c. Establish specific Best Management Practices to meet the objectives identified under paragraph b of this section, addressing each component or system capable of causing a release of "BMP pollutants."
- d. Include any special conditions established in part b of this section.
- e. Be reviewed by plant engineering staff and the plant manager.

5. Specific Requirements

The plan shall be consistent with the general guidance contained in the publication entitled "NPDES Best Management Practices Guidance Document," and shall include the following baseline BMPs as a minimum.

- a. BMP Committee
- b. Reporting of BMP Incidents
- c. Risk Identification and Assessment
- d. Employee Training
- e. Inspections and Records
- f. Preventive Maintenance
- g. Good Housekeeping
- h. Materials Compatibility
- i. Security
- j. Materials Inventory

6. SPCC Plans

The BMP plan may reflect requirements for Spill Prevention Control and Countermeasure (SPCC) plans under Section 311 of the Act and 40 CFR Part 151, and may incorporate any part of such plans into the BMP plan by reference.

7. Hazardous Waste Management

The permittee shall assure the proper management of solid and hazardous waste in accordance with the regulations promulgated under the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act of 1978 (RCRA) (40 U.S.C. 6901 et seq.) Management practices required under RCRA regulations shall be referenced in the BMP plan.

8. Documentation

The permittee shall maintain a description of the BMP plan at the facility and shall make the plan available upon request to EEC personnel. Initial copies and modifications thereof shall be sent to the following addresses when required by Section 3:

Division of Water
Surface Water Permits Branch
Permit Support Section
200 Fair Oaks Lane
Frankfort, Kentucky 40601

9. BMP Plan Modification

The permittee shall amend the BMP plan whenever there is a change in the facility or change in the operation of the facility which materially increases the potential for the ancillary activities to result in the release of "BMP pollutants."

10. Modification for Ineffectiveness

If the BMP plan proves to be ineffective in achieving the general objective of preventing the release of "BMP pollutants," then the specific objectives and requirements under paragraphs b and c of Section 4, the permit, and/or the BMP plan shall be subject to modification to incorporate revised BMP requirements. If at any time following the issuance of this permit the BMP plan is found to be inadequate pursuant to a state or federal site inspection or plan review, the plan shall be modified to incorporate such changes necessary to resolve the concerns.

SECTION B. SPECIFIC CONDITIONS

The following items may be incorporated into the BMP plan:

Development and implementation of Best Management Practices to control contaminated runoff from haul roads, exploration sites, access roads, etc. Implementation of such practices in lieu of monitoring and complying with effluent limits for these point sources must be approved by the KDOW`.

The Groundwater Protection Plan as required by 401 KAR 5:037

The conditions of any 401 Water Quality Certification granted to the operation.

Development and implementation of a source water monitoring program at the intake location. The source water monitoring plan should include those parameters required by the effluent requirements of this permit and should be monitored at a minimum of once per quarter. The permittee shall maintain these monitoring records in accordance with the requirements of 401 KAR 5:065, Section 1(10), and submit records upon written request by the EEC personnel.

Establish notification procedures for the purpose of informing downstream intakes that a catastrophic release has occurred and that appropriate actions by the intake may be required. The notification procedures shall detail the criteria by which a release is considered a catastrophic event, the methods which will be utilized to notify the impacted water supplier that such an event has occurred, and the names, telephone numbers, and e-mail addresses of the contacts with the subject water supply and those responsible persons representing the permittee. This site specific BMP Plan shall be developed and submitted to the Division of Water for review and comment within 90 days of the effective date of the permit. Implementation of the BMP Plan shall be with 180 days of the effective date of the permit.